

**To:** Steven M. Espenshade([tmcentral@pirkeybarber.com](mailto:tmcentral@pirkeybarber.com))  
**Subject:** U.S. Trademark Application Serial No. 97733259 - GPT - OPAI013US  
**Sent:** May 25, 2023 09:34:59 AM EDT  
**Sent As:** [tmng.notices@uspto.gov](mailto:tmng.notices@uspto.gov)

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#### Attachments

[screenshot-www-acronymfinder-com-GPT-html-16847601966581](#)  
[screenshot-www-merriam-webster-com-dictionary-generative-16847609712101](#)  
[screenshot-www-merriam-webster-com-dictionary-pre-trained-16847611036131](#)  
[screenshot-www-merriam-webster-com-dictionary-transformer-16847611541101](#)  
[screenshot-www-ideamotive-co-gpt-software-16847617859881](#)  
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[screenshot-jamesmccaffrey-wordpress-com-2021-11-16-how-to-create-a-transformer-architecture-model-for-natural-language-processing-in-visual-studio-magazine-16847618801751](#)  
[screenshot-realestatecareerhq-com-ai-virtual-staging-16847619381921](#)

### United States Patent and Trademark Office (USPTO) Office Action (Official Letter) About Applicant's Trademark Application

**U.S. Application Serial No.** 97733259

**Mark:** GPT

**Correspondence Address:**

Steven M. Espenshade  
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1801 EAST 6TH STREET  
SUITE 300  
AUSTIN TX 78702 UNITED STATES

**Applicant:** OPENAI OPCO, LLC

**Reference/Docket No.** OPAI013US

**Correspondence Email Address:** [tmcentral@pirkeybarber.com](mailto:tmcentral@pirkeybarber.com)

## NONFINAL OFFICE ACTION

**Response deadline.** File a response to this nonfinal Office action within three months of the “Issue date” below to avoid [abandonment](#) of the application. Review the Office action and respond using one of the links to the appropriate electronic forms in the “How to respond” section below.

**Request an extension.** For a fee, applicant may [request one three-month extension](#) of the response

deadline prior to filing a response. The request must be filed within three months of the “Issue date” below. If the extension request is granted, the USPTO must receive applicant’s response to this letter within six months of the “Issue date” to avoid abandonment of the application.

**Issue date:** May 25, 2023

The referenced application has been reviewed by the assigned trademark examining attorney. Applicant must respond timely and completely to the issues below. 15 U.S.C. §1062(b); 37 C.F.R. §§2.62(a), 2.65(a); TMEP §§711, 718.03.

### **SEARCH OF USPTO DATABASE OF MARKS**

The trademark examining attorney has searched the USPTO database of registered and pending marks and has found no conflicting marks that would bar registration under Trademark Act Section 2(d). 15 U.S.C. §1052(d); TMEP §704.02.

### **SUMMARY OF ISSUES:**

- Section 2(e)(1) Refusal—Merely Descriptive
- Advisory: Supplemental Register
- Specimen Not Acceptable—*Partial Refusal as to Class 09*

### **SECTION 2(e)(1) REFUSAL—MERELY DESCRIPTIVE**

Registration is refused because the applied-for mark merely describes a feature, function, or characteristic of applicant’s goods and services. Trademark Act Section 2(e)(1), 15 U.S.C. §1052(e)(1); *see* TMEP §§1209.01(b), 1209.03 *et seq.*

An abbreviation, initialism, or acronym is merely descriptive when it is generally understood as “substantially synonymous” with the descriptive words it represents. *See In re Thomas Nelson, Inc.*, 97 USPQ2d 1712, 1715 (TTAB 2011) (citing *Modern Optics, Inc. v. Univis Lens Co.*, 234 F.2d 504, 506, 110 USPQ 293, 295 (C.C.P.A. 1956)) (holding NKJV substantially synonymous with merely descriptive term “New King James Version” and thus merely descriptive of bibles); *In re BetaBatt Inc.*, 89 USPQ2d 1152, 1155 (TTAB 2008) (holding DEC substantially synonymous with merely descriptive term “direct energy conversion” and thus merely descriptive of a type of batteries and battery related services); TMEP §1209.03(h).

A mark consisting of an abbreviation, initialism, or acronym will be considered substantially synonymous with descriptive wording if:

- (1) the applied-for mark is an abbreviation, initialism, or acronym for specific wording;
- (2) the specific wording is merely descriptive of applicant’s goods and/or services; and
- (3) a relevant consumer viewing the abbreviation, initialism, or acronym in connection with

applicant's goods and/or services will recognize it as the equivalent of the merely descriptive wording it represents.

TMEP §1209.03(h); *see In re Thomas Nelson, Inc.*, 97 USPQ2d at 1715-16 (citing *In re Harco Corp.*, 220 USPQ 1075, 1076 (TTAB 1984)).

In the present case, the attached evidence shows that applicant's mark "GPT" is an acronym for the wording "generative pre-trained transformer." According to the attached definitions from Merriam-Webster Dictionary, "GENERATIVE" means having the power or function of generating, originating, producing, or reproducing, "PRE-TRAINED" means to "train in advance," and "TRANSFORMER" means "one that transforms." Further, the attached Internet evidence demonstrates such wording is commonly used in applicant's industry to refer to a particular type of software featuring artificial intelligence (AI) that generates responses based on a pool of pre-existing resources that the software uses to generate its responses to user questions. Some examples of such use are:

- "As AI technology advances, the development of **GPT (Generative Pretrained Transformer)** models has become increasingly popular. In this article, we will take you through the process of building your own **GPT** project, from planning to deployment." <https://www.ideamotive.co/gpt-software>
- "We have been using a **GPT** model to explain our insights to operators as a part of BMC HelixGPT, and we have now started to decorate our root-cause insights with ticket resolution-based prescriptions. We constrain our **GPT** with a domain and tenant-specific model that continuously learns resolutions from subject matter experts (SMEs) in the organization—hence the phrase "expert of (your) systems"—and prompt our **GPT** with root-cause analysis we conduct using observational data in prior steps in our AI architecture." <https://www.bmc.com/blogs/bmc-helixgpt-expert-of-your-systems/>
- "One example of this technology is RoomGPT.io, an AI-powered virtual staging tool. RoomGPT.io uses **GPT** technology, which stands for **Generative Pretrained Transformer**, to generate realistic images of staged rooms. This technology is able to create images that are so realistic that it can be hard to distinguish them from actual photos." <https://realestatecareerhq.com/ai-virtual-staging/>

Accordingly, the applied-for mark "GPT" will immediately convey to relevant consumers that applicant's software goods and/or services feature AI based software that have the function of generating responses based on a set of pre-existing data it is trained with in advance, wherein the software transforms inputted information into conversational responses or transforms data into text, images, or other languages in response to a user question or request.

Considering the above, the applied-for mark is refused registration under Trademark Act Section 2(e)(1). Although applicant's mark has been refused registration, applicant may respond to the refusal(s) by submitting evidence and arguments in support of registration.

Applicant should note the advisory below.

#### **ADVISORY: SUPPLEMENTAL REGISTER**

In addition to being merely descriptive, the applied-for mark appears to be generic in connection with the identified goods and/or services. “A generic mark, being the ‘ultimate in descriptiveness,’ cannot acquire distinctiveness” and thus is not entitled to registration on either the Principal or Supplemental Register under any circumstances. *In re La. Fish Fry Prods., Ltd.*, 797 F.3d 1332, 1336, 116 USPQ2d 1262, 1264 (Fed. Cir. 2015) (quoting *H. Marvin Ginn Corp. v. Int’l Ass’n of Fire Chiefs, Inc.*, 782 F.2d 987, 989, 228 USPQ 528, 530 (Fed. Cir. 1986)); *see* TMEP §§1209.01(c) *et seq.*, 1209.02(a). Therefore, the trademark examining attorney cannot recommend that applicant amend the application to proceed under Trademark Act Section 2(f) or on the Supplemental Register as possible response options to this refusal. *See* TMEP §1209.01(c).

Applicant should note the additional refusal below.

### **SPECIMEN NOT ACCEPTABLE**

#### *Partial Refusal as to Class 09*

**Specimen is not an acceptable display for software.** Registration is refused because the specimen in International Class 9 is not acceptable as a display associated with downloadable software and does not show the applied-for mark as actually used in commerce. Trademark Act Sections 1 and 45, 15 U.S.C. §§1051, 1127; 37 C.F.R. §§2.34(a)(1)(iv), 2.56(a), (b)(1); TMEP §§904, 904.03(e), (g), 904.07(a). An application based on Trademark Act Section 1(a) must include a specimen showing the applied-for mark as actually used in commerce for each international class of goods identified in the application or amendment to allege use. 15 U.S.C. §1051(a)(1); 37 C.F.R. §§2.34(a)(1)(iv), 2.56(a); TMEP §§904, 904.07(a).

A display specimen for downloadable software (1) must show use of the mark directly associated with the goods and (2) such use must be of a point-of-sale nature. 37 C.F.R. §2.56(b)(1). To show use of a point-of-sale nature, a specimen generally must provide sufficient information to enable the user to download or purchase the software from a website. *See* TMEP §904.03(e) (citing *In re Azteca Sys., Inc.*, 102 USPQ2d 1955, 1957 (TTAB 2012)).

In this case, the specimen does not provide the means to enable the user to download or purchase the software from the website. *See In re Sones*, 590 F.3d 1282, 1286-89, 93 USPQ2d 1118, 1122-24 (Fed. Cir. 2009); *In re Azteca Sys., Inc.*, 102 USPQ2d at 1957; TMEP §904.03(e), (i). Specifically, applicant has provided multiple screenshots of webpages with information describing various software models with non-matching marks such as "GPT-DISCORD-BOT", "GPT-2", and "OPENAI-GPT" with descriptions about how to download these different software models. Applicant also has various webpages showing "GPT" used with an online transformer and descriptions of a GPT software for images and languages. None of these webpages demonstrate the ability to download the identified software with the matching mark "GPT".

Accordingly, such material is mere advertising, which is not acceptable as a specimen for goods. *See In re Yarnell Ice Cream, LLC*, 2019 USPQ2d 265039, at \*15-16 (TTAB 2019) (quoting *In re Siny Corp.*, 920 F.3d 1331, 1336, 2019 USPQ2d 127099, at \*2-3 (Fed. Cir. 2019)); *see also Avakoff v. S. Pac. Co.*, 765 F.2d 1097, 1098, 226 USPQ 435, 436 (Fed. Cir. 1985); TMEP §904.04(b), (c).

Furthermore, the mark appearing on the specimen and in the drawing must match; that is, the mark in the drawing “must be a substantially exact representation of the mark” on the specimen. *See* 37 C.F.R.

§2.51(a)-(b); TMEP §807.12(a). Here, the marks on the software associated with the download instructions differs from the applied-for mark because of the extra wording included with the dashes. Applicant has thus failed to provide the required evidence of use of the mark in commerce for Class 09. *See* TMEP §807.12(a).

**Examples of specimens.** Specimens for downloadable software include instruction manuals or screen printouts from (1) webpages showing (a) the mark associated with the software and (b) ordering or purchasing information or information sufficient to download the software, (2) the actual program while running that shows the mark in the title bar, or (3) launch screens that show the mark in an introductory message box that appears after opening the program. *See* TMEP §904.03(e), (i), (j). Any webpage printout or screenshot submitted as a specimen must include the webpage’s URL and the date it was accessed or printed on the specimen itself, within the TEAS form that submits the specimen, or in a verified statement under 37 C.F.R. §2.20 or 28 U.S.C. §1746 in a later-filed response. *See* 37 C.F.R. §2.56(c); TMEP §§904.03(i), 1301.04(a).

**Response options.** Applicant may respond to this refusal by satisfying one of the following for each applicable international class:

(1) Submit a different specimen (a verified [“substitute” specimen](#)) that (a) was in actual use in commerce at least as early as the filing date of the application or prior to the filing of an amendment to allege use and (b) shows the mark in actual use in commerce for the software identified in the application or amendment to allege use. A “verified substitute specimen” is a specimen that is accompanied by the following statement made in a signed affidavit or supported by a declaration under 37 C.F.R. §2.20: “The substitute (or new, or originally submitted, if appropriate) specimen(s) was/were in use in commerce at least as early as the filing date of the application or prior to the filing of the amendment to allege use.” The substitute specimen cannot be accepted without this statement.

(2) Amend the filing basis to [intent to use under Section 1\(b\)](#) (which includes withdrawing an amendment to allege use, if one was filed), as no specimen is required before publication. This option will later necessitate additional fee(s) and filing requirements, including a specimen.

For an overview of the response options referenced above and instructions on how to satisfy these options using the online Trademark Electronic Application System (TEAS) form, see the [Specimen webpage](#).

## **RESPONSE GUIDELINES**

For this application to proceed, applicant must explicitly address each refusal and/or requirement in this Office action. For a refusal, applicant may provide written arguments and evidence against the refusal, and may have other response options if specified above. For a requirement, applicant should set forth the changes or statements. Please see [“Responding to Office Actions”](#) and the informational [video “Response to Office Action”](#) for more information and tips on responding.

Please call or email the assigned trademark examining attorney with questions about this Office action.

**Trademark Assistance Center**

The Trademark Assistance Center (TAC) is the main support center for all customers, from first-time filers to legal professionals and experienced trademark applicants. Contact the Trademark Assistance Center for:

General information about registering a trademark

Trademark literature and publications

Updates on the status of trademark applications and registrations

Answers to case-specific questions about an application or registration

Help navigating electronic forms and systems

Help finding information on our website about the meaning of trademark terms and concepts, how to start the application process, application and registration timelines, and more.

TAC is open from 8:30am to 8:00pm ET:

Toll free: 1-800-786-9199 (press 1)

Local: 571-272-9250 (press 0)

International: 1-571-272-9250 (press 0)

Email: TrademarkAssistanceCenter@uspto.gov

**How to respond.** File a [response form to this nonfinal Office action](#) or file a [request form for an extension of time to file a response](#).

/Kelly Burke/  
Kelly Burke  
Examining Attorney  
LAW OFFICE 128  
(571) 272-6205  
Kelly.Burke@uspto.gov

## RESPONSE GUIDANCE

- **Missing the deadline for responding to this letter will cause the application to [abandon](#).** A response or extension request must be received by the USPTO before 11:59 p.m. **Eastern Time** of the last day of the response deadline. Trademark Electronic Application System (TEAS) [system availability](#) could affect an applicant's ability to timely respond. For help resolving technical issues with TEAS, email [TEAS@uspto.gov](mailto:TEAS@uspto.gov).
- **[Responses signed by an unauthorized party](#)** are not accepted and can **cause the application to [abandon](#)**. If applicant does not have an attorney, the response must be signed by the individual applicant, all joint applicants, or someone with [legal authority to bind a juristic applicant](#). If applicant has an attorney, the response must be signed by the attorney.
- If needed, **find [contact information for the supervisor](#)** of the office or unit listed in the signature block.

AF

Acronym Finder

Abbreviation to define

GPT

Find

☒ abbreviation

☐ word in meaning

☐ location

Examples: NFL, NASA, PSP, HIPAA, random Word(s) in meaning: chat "global warming" Postal codes: USA: 61657, Canada: T5A 0A7

# What does GPT stand for?

Your abbreviation search returned 31 meanings

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Business & Finance (10)

Slang, Chat & Pop culture (2)

Sort results: alphabetical | rank ?

| Rank  | Abbr. | Meaning  |
|---|-------|--|
| 1   | GPT   | Get Paid To  |
| 2   | GPT   | GUID Partition Table                                     |
| 3   | GPT   | Generative Pre-Trained Transformer (language processing) |
| Advertisement: Bad banner? Please let us know |       |  |
| 4   | GPT   | General Property Trust (Australia)                       |
| 5   | GPT   | Gross Pollutant Trap                                     |
| 6   | GPT   | Gateway Pacific Terminal (Bellingham, WA)                |
| 7   | GPT   | Get Paid Today   |

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It's easier to pour the ketchup if you shake the bottle up first

shake up

shake upTo shake something in order to mix up or loosen its contents. A noun or pronoun can be used between 'shake' and 'up. Make sure you shake up the carton of juice... [Go To Article](#)

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shut offTo deactivate something; to turn something off. A noun or pronoun can be used... [Watch Video](#)

set at

set atTo physically attack someone with great ferocity or hostility Watch out for... [Watch Video](#)

meet with (someone or...)


meet with (someone or something)To elicit a particular response.Mom's... [Watch Video](#)

|   |     |   |   |
|---|-----|---|---|
| 🔍🔍🔍🔍🔍   | GPI | Gas Pressure Test                                       | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Gas Phase Titration (ozone analysis)                    | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | General Purpose Technology                              | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Group Policy Template (Windows Server)                  | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Green Party, Taiwan                                     | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | General Purpose Timer                                   | 🔍 |
| <div><div><b>PREDATOR</b><br/>miss nothing</div><div></div><div></div><div><a href="#">SHOP NOW</a></div></div> <div>Advertisement. Bad banner? Please <a href="#">let us know</a></div> |     |   |   |
| 🔍🔍🔍🔍🔍   | GPT | Gameport (computer connection)                          | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Grand Prix Trial (competition)                          | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Going Private Transaction (finance)                     | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Global Payment Technologies, Inc. (Hauppauge, New York) | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Global Partition Table (Microsoft)                      | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Gulfport, MS, USA - Gulfport/Biloxi (Airport Code)      | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Generalized Preferential Tariff                         | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Grams Per Ton   | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Gabidulin-Paramonov-Tretjakov (public key cryptosystem) | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Government Properties Trust, Inc.                       | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Gross Profit Tax  | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | General Plant Telephone                                 | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Global Positioning Technology                           | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Glutamic/Glutamate Pyruvic Transaminase                 | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Gold Particle Test                                      | 🔍 |
| 🔍🔍🔍🔍🔍   | GPT | Graphic Programming Terminal                            | 🔍 |


### shake up

shake upTo shake something in order to mix up or loosen its contents. A noun or pronoun can be used between 'shake' and 'up'. Make sure you shake up the carton of juice... [Go To Article](#)

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shut offTo deactivate something, to turn something off. A noun or pronoun can be used... [Watch Video](#)



**set at**  
set atTo physically attack someone with great ferocity or hostility Watch out for... [Watch Video](#)



**meet with (someone or...)**  
meet with (someone or something)To elicit a particular response.Mom's... [Watch Video](#)

Global Publishing Technology

Gross Pay Tape

Note: We have 155 other definitions for **GPT** in our Acronym Attic

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something)To elicit a particular response.Mom's... [Watch Video](#)

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GPSTS

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GPSWA

GPSy

GPTA

gpTAA

GPTC

GPTD

GPTe

GPTEC

GPTEd

GPTF

GPTI

GPTL



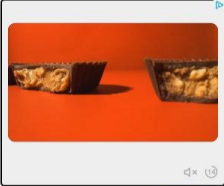
to turn something off. A noun or pronoun can be used... [Watch Video](#)

**set at**  
set atTo physically attack someone with great ferocity or hostility.Watch out for... [Watch Video](#)

**meet with (someone or...)**  
meet with (someone or something)To elicit a particular response.Mom's... [Watch Video](#)

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generative



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Shop

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Dictionary

Thesaurus

generative



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Est. 1828

**KitchenAid**  
EXPLORE CREATIVE  
POSSIBILITIESPay over time with Affirm,  
with as low as 0% APR financing\*

SHOP NOW

\*Click for details

## Dictionary

## Definition

Example Sentences

Word History

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## generative adjective

gener-a-tive (ˈje-nə-rə-tiv) | ˈjen-rə-tiv, (ˈje-nə-,rə-tiv)

Synonyms of *generative* >

: having the power or function of generating, originating, producing, or reproducing



## Example Sentences

## Recent Examples on the Web

Unlike the phone's predictive text feature, ChatGPT is said to be *generative* (the G in GPT).— Joella Carman, *NBC News*, 17 May 2023These stats are really remarkable, especially given how recently *generative* A.I.'s appearance started sounding alarm bells.— David Meyer, *Fortune*, 17 May 2023Synonyms of *generative* >

Example Sentences

Word History

Phrases Containing

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generative or generative

having the power or function of generating, originating, producing, or reproducing

AMA

Power ahead with powerful skills

\$500 OFF ANY AMA SEMINAR

GET OFFER

Example Sentences

Recent Examples on the Web

Unlike the phone's predictive text feature, ChatGPT is said to be *generative* (the G in GPT).

Joella Carman, *NBC News*, 17 May 2023

These stats are really remarkable, especially given how recently *generative* A.I.'s appearance started sounding alarm bells.

David Meyer, *Fortune*, 17 May 2023

But in the *generative* space, that's just not how this technology works.

Ryan Faughnder, *Los Angeles Times*, 16 May 2023

See More

These examples are programmatically compiled from various online sources to illustrate current usage of the word 'generative.' Any opinions expressed in the examples do not represent those of Merriam-Webster or its editors. Send us feedback about these examples.

Sunblock

Headache

Minor "Stress Pain?"

Headache is calculated for the temporary relief of some pain of stress.

Headache is a common pain that is usually caused by stress.

Headache is a common pain that is usually caused by stress.

Quordle

W O R D Y

L O V E R

P L A Y S

D A I L Y

Can you solve 4 words at once?

Play

KitchenAid

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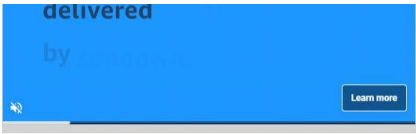
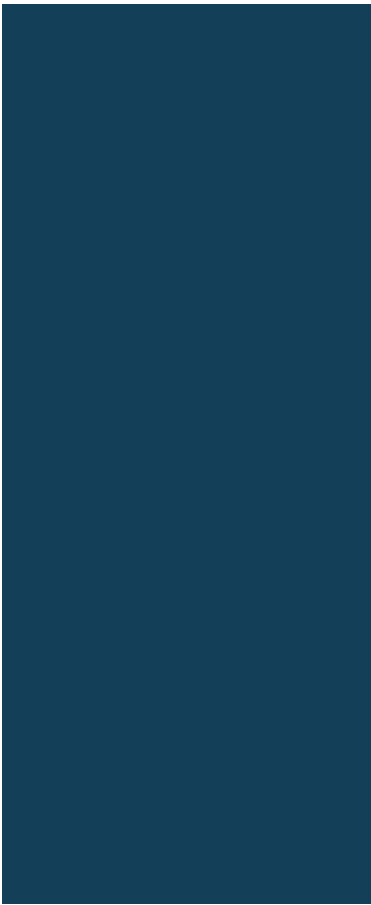
officials

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### Word History

#### First Known Use

14th century, in the meaning defined above

#### Time Traveler

The first known use of *generative* was in the 14th century

[See more words from the same century](#)

### Phrases Containing *generative*

generative cell      generative grammar      generative nucleus  
generative semantics

### Dictionary Entries Near *generative*

Generation Z  
**generative**  
generative cell

[See More Nearby Entries >](#)

### Cite this Entry

Style

"Generative." *Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/generative>. Accessed 22 May. 2023.  
[Copy Citation](#)

#### Share



#### Medical Definition

## generative adjective

gen-er-a-tive ˈjɛn-(ə-)rət-iv -ə-rāt-

: having the power or function of propagating or reproducing

| *generative* organs

#### More from Merriam-Webster on *generative*

Thesaurus: [All synonyms and antonyms for \*generative\*](#)

Britannica English: [Translation of \*generative\* for Arabic Speakers](#)

Last Updated: 21 May 2023 - Updated example sentences

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**Palter, Dissemble, and  
Other Words for Lying**  
Trust us



**Skunk, Bayou, and Other  
Words with Native  
American Origins**  
You've used more than you  
might think



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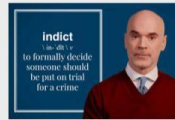
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pretrain verb

pre-train (.prē-ˈtrān)

variants or pre-train

pretrained or pre-trained; pretraining or pre-training

transitive verb

: to train in advance

School volunteers are pretrained before they are sent into classrooms.

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Word History

First Known Use

1943, in the meaning defined above

Time Traveler

The first known use of pretrain was in 1943

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variants *or* **pre-train**  
**pretrained** *or* **pre-trained**; **pretraining** *or* **pre-training**  
*transitive verb*  
**:** **to train in advance**  
School volunteers are *pretrained* before they are sent into classrooms.



Word History


**First Known Use**  
1943, in the meaning defined above

**Time Traveler**  
The first known use of *pretrain* was in 1943  
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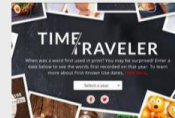
##### Skunk, Bayou, and Other Words with Native American Origins

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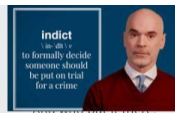
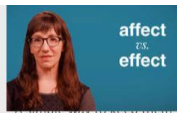
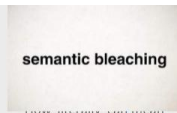
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transformer noun

trans-form-er    tran(t)is- fôr-mēr

Synonyms of transformer

: one that transforms

specifically : a device employing the principle of mutual induction to convert variations of current in a primary circuit into variations of voltage and current in a secondary circuit

Save Word 📌



### Example Sentences

#### Recent Examples on the Web

The *transformer* appeared to burn for several minutes before causing a large explosion.

— Kerry Breen, *CBS News*, 4 Mar. 2023

And on Wednesday, the Finnish Confederation of Industries sponsored an all-day

### Example Sentences

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The *transformer* appeared to burn for several minutes before causing a large explosion.

— Kerry Breen, *CBS News*, 4 Mar. 2023

And on Wednesday, the Finnish Confederation of Industries sponsored an all-day webinar with Ukrainian officials so companies could show off their wastewater treatment plants, *transformers*, threshers and prefabricated housing.

— Liz Alderman, *New York Times*, 16 Feb. 2023

The fire at Brockton Hospital broke out around 8 a.m. on Feb. 7 in a *transformer* room in a building connected to the hospital.

— Travis Andersen, *BostonGlobe.com*, 15 Feb. 2023

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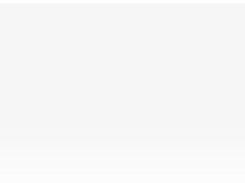
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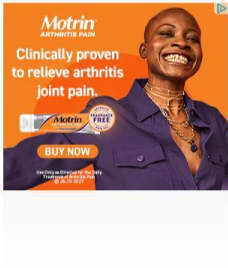
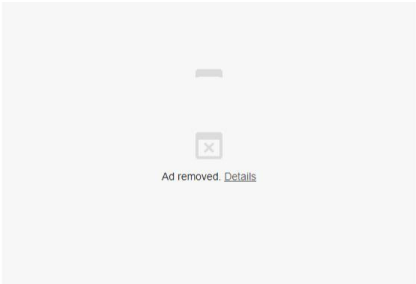
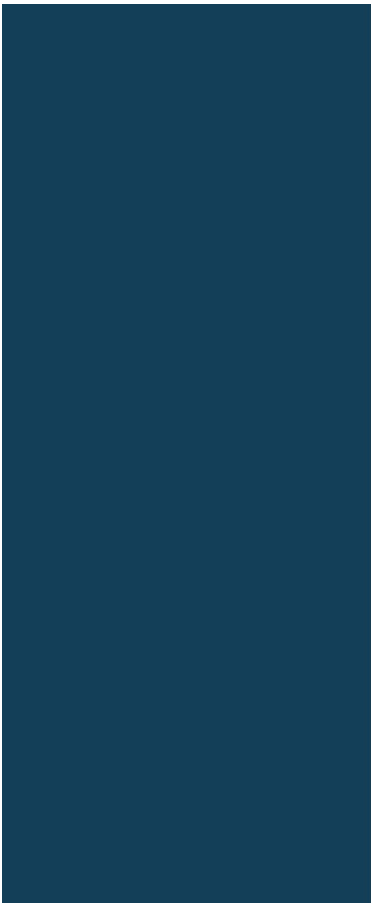
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### Word History

#### First Known Use

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The first known use of *transformer* was in 1596

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**transformer**

transformer oil

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## Kids Definition

# transformer noun

trans·form·er tran(t)s-ˈfôr-mər ⓘ

: a device for changing an electric current into one of different voltage



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'figuratively'



...to keep them  
apart. (Most of the time.)



anyway?



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**Håkon Årøen**

Co-founder & CTO of Memcare

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**Julian Peterson**

President, Luminate Enterprises



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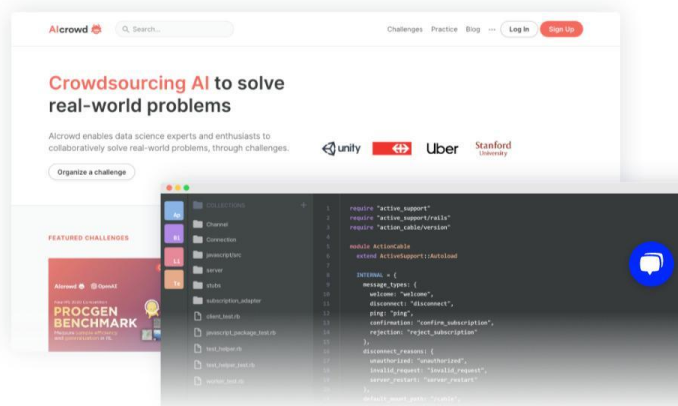
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## Building a GPT Project: From Planning to Deployment

As AI technology advances, the development of GPT (Generative Pretrained Transformer) models has become increasingly popular. In this article, we will take you through the process of building your own GPT project, from planning to deployment.

**Planning the Project** Before starting any project, it's important to define your goals and choose the appropriate GPT model for your needs. You'll also need to collect and prepare the dataset you'll use to train the model.

**Building the Model** Setting up the development environment, installing the necessary libraries and dependencies, and writing the code for the GPT model are all crucial steps in the building process. You'll also need to make sure your code is properly optimized for the GPT model you've chosen.

**Training the Model** Once your model is built, it's time to start training it. This involves preprocessing your dataset, configuring the training process, and running the training process until your model reaches the desired level of performance.

**Evaluating the Model** After the training process is complete, it's important to evaluate the model's performance. This involves measuring its accuracy and analyzing the generated language to identify areas for improvement.

**Deploying the Model** Once you've evaluated and fine-tuned your model, it's time to deploy it. This involves exporting the trained model, setting up the deployment environment, and building an interface for the model so that it can be used in real-world applications.

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In conclusion, building a **GPT** project requires careful planning, a solid understanding of the development process, and the right tools and resources. By following the steps outlined in this article, you can start building your own **GPT** projects and unlock the full potential of this powerful technology.

AI Development: FAQ

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| How to Implement AI in Your Business?  | + |
| How are Companies Implementing AI?   | + |
| How to Develop AI Chatbot?   | + |
| How to Use AI in Web Development?  | + |
| How to Develop AI Using Python?  | + |
| How can Chat <b>GPT</b> enhance the capabilities of AI applications in various industries? | + |
| What are some practical applications of Chat <b>GPT</b> ?                                  | + |

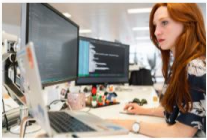


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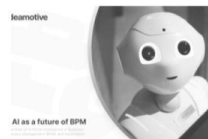
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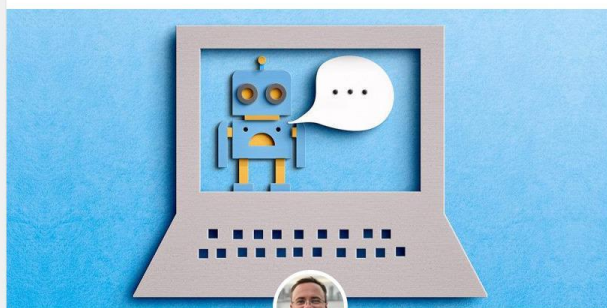
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## BMC HelixGPT: An Expert of (Your) Systems



March 17, 2023

3 minute read

[Erhan Giral](#)



We have reached a historic point where artificial intelligence (AI) is unleashing the next level of human efficiency. We haven't achieved artificial general intelligence (AGI), nowhere near close, but we will see increasing applications of AI in diverse verticals. Enterprise operations

**bmc** helix

HAVING TROUBLE  
FINDING ROOT  
CAUSE OF AN ISSUE?

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increasing applications of AI in enterprise operations. Enterprise operations will be one of the first domains that will see significant impact with this shift.

Rapidly declining hardware costs, increasing availability of operational data, and recent modelling breakthroughs are enabling a tectonic transformation for the way enterprises will run their operations. We believe the future of enterprise IT and telecommunication networks will be more data driven, proactive, efficient, and less chaotic, which in turn will enable more innovation.

## BMC's application of GPT technology

Our mission here at BMC is to enable efficient digital enterprises. We believe the next level of efficiency in enterprise operations will require near real-time processing of operational data (observational and control plane data from infrastructure, applications, and end users) such that AI can establish an unadulterated view of reality, while ticket, incident, and change data (the activities of humans touching these systems) inform it on how human beings have been responding to issues native to the environment and business.

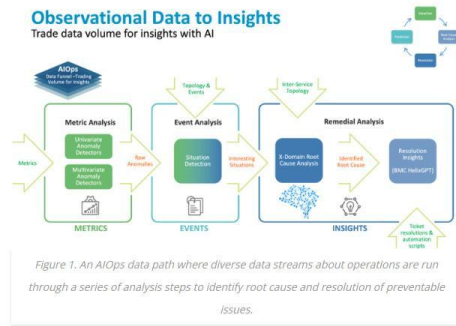
BMC HelixGPT, the working name for emerging GPT technology, integrates all these traditionally siloed data sources together to derive actionable insights for anomalies and autonomous resolution for mundane issues.

For this purpose, we have architected an AI platform that distills operational data into actionable insights (more on this later). It's a pipeline of AI models that automates L1/L2 IT analyst use cases (anomaly detection, root cause analysis, and mitigation) by eyeballing operational data from IT or telecom services.

We ingest and integrate operational data from all observable layers. We distill anomalous patterns from metrics and logs into events and correlate them with all sorts of other events and change data in the system, with the help of topological data sources. The result of our operational data analysis is neatly packaged insights that we call



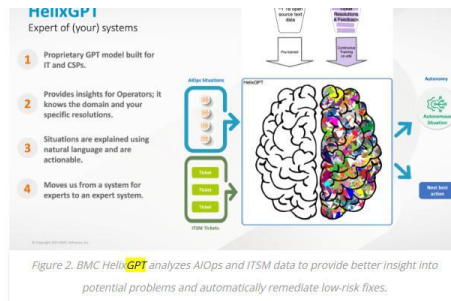
Situations. Situations are causally ordered event chains that allow us to do root cause analysis and fingerprinting of repeat issues. They also give us a corpus of event patterns, which we then use to build predictive models around brewing problems. Our data pipeline looks roughly like the following diagram.



In our observation, telecom networks and sufficiently complex IT services often create tribal support groups around different layers of their architectures. Telecom businesses, for instance, span several related but distinct domains. These domains are vastly different from each other as they cover operational characteristics of facilities and buildings (power, cooling, etc.), transmission networks (aggregate data networks across vast geographies), core IP/WAN (high throughput networking for software definable circuits), network services (dynamic network definitions), and end user services (services rendered/metered for a customer). Operational knowledge about these domains is often recorded in ticket resolutions but gets trapped in different systems, authored by and catering towards different subject matter experts.

We leverage these tribal resolutions by tapping into ticket worklogs. We separate redundant entries from actual resolutions and use these resolutions to train a large neural network that complements a Generative Pretrained Transformer (GPT) model, as shown in the below diagram.



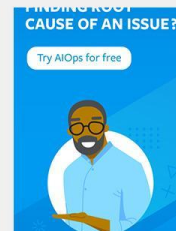
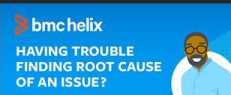


We are very excited about recent developments in GPT models, as they have validated our approach to solving full-cycle assurance. We have been using a GPT model to explain our insights to operators as a part of BMC HelixGPT, and we have now started to decorate our root-cause insights with ticket resolution-based prescriptions. We constrain our GPT with a domain and tenant-specific model that continuously learns resolutions from subject matter experts (SMEs) in the organization—hence the phrase “expert of (your) systems”—and prompt our GPT with root-cause analysis we conduct using observational data in prior steps in our AI architecture.

We developed this model to keep the insights provided by BMC Helix human-relatable and, yet, still specific to the enterprise so answers are based on your organization’s expertise.

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## About the author



### Erhan Giral

Currently BMC's chief AI architect, Erhan Giral has been working in the software intelligence space for fifteen years and holds various patents related to operational intelligence and application monitoring fields. Previously, Erhan worked on various graph-based reasoning frameworks, and monitoring solutions servicing diverse industries.

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## James D. McCaffrey

Software Research, Development,  
Testing, and Education

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## How to Create a Transformer Architecture Model for Natural Language Processing in Visual Studio Magazine.

Posted on November 16, 2021 by jamesdmccaffrey

I wrote an article titled "How to Create a Transformer Architecture Model for Natural Language Processing" in the November 2021 edition of the online Microsoft Visual Studio Magazine. See <https://visualstudiomagazine.com/articles/2021/11/03/transformer-architecture-model.aspx>.



My article explains how to create a transformer architecture model for natural language processing. Specifically, the article shows how to create a model that accepts a sequence of words such as "The man ran through the {blank} door" and then predicts most-likely words to fill in the blank.



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```
#!/usr/bin/env python3
# coding: utf-8
# Author: @hacker0x01
# Title: Fill in the blank using BERT
# Description: This script uses a pre-trained DistilBERT model to fill in the blank of a sentence.

import sys
import torch
from transformers import DistilBertTokenizer, DistilBertForSequenceClassification

# Load the pre-trained model and tokenizer
tokenizer = DistilBertTokenizer.from_pretrained('distilbert-base-uncased')
model = DistilBertForSequenceClassification.from_pretrained('distilbert-base-uncased')

# The sentence to fill in the blank
sentence = "The man ran through the (blank) door."

# Tokenize the sentence
tokens = tokenizer.tokenize(sentence)

# Remove the blank token
tokens.remove(tokens.index('(blank)'))

# Compute the likelihoods of the top 5 candidates
candidates = ['front', 'back', 'bathroom', 'kitchen', 'garage']

# Compute the likelihoods of the top 5 candidates
likelihoods = {}
for candidate in candidates:
    tokens.append(candidate)
    token_ids = tokenizer.convert_tokens_to_ids(tokens)
    outputs = model(torch.tensor([token_ids]))
    likelihoods[candidate] = outputs.log_softmax(-1).tolist()[0]
    tokens.remove(candidate)

# Sort the candidates by likelihood
sorted_candidates = sorted(likelihoods.items(), key=lambda item: item[1], reverse=True)

# Print the top 5 candidates
for candidate, likelihood in sorted_candidates:
    print(candidate, likelihood)
```

Transformer architecture (TA) models such as BERT (bidirectional encoder representations from transformers) and GPT (generative pretrained transformer) have revolutionized natural language processing (NLP). But TA systems are extremely complex, and implementing them from scratch can take hundreds or thousands of man-hours. The Hugging Face (HF) library is open source code that has pretrained TA models and an API set for working with the models. The HF library makes implementing NLP systems using TA models much less difficult.

The demo program begins by loading a pretrained DistilBERT language model into memory. DistilBERT is a condensed version of the huge BERT language model. The source sentence is passed to a Tokenizer object which breaks the sentence into words/tokens and assigns an integer ID to each token. For example, one of the tokens is "man" and its ID is 1299, and the token that represents the blank-word is [MASK] and its ID is 103.

The token IDs are passed to the DistilBERT model and the model computes the likelihoods of 28,996 possible words/tokens to fill in the blank. The top five candidates to fill in the blank for "The man ran through the (blank) door" are: "front," "bathroom," "kitchen," "back" and "garage."

One way to think about the fill-in-the-blank example presented in this article is that the DistilBERT model gives you an English language expert. You can ask this expert things such as what is the missing word in a sentence, or how similar two words are. But the DistilBERT expert doesn't have specific knowledge about anything beyond pure English. For example, the basic DistilBERT model doesn't know anything about movies. It is possible to start with a basic DistilBERT model and then fine-tune the model to give it knowledge about movie reviews in order to create a movie review expert. The fine-tuned expert will know about English and also about the difference between a good movie review and a bad review.



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- 2021 Azure AI Conference
- March 22-25, 2022



Artificial intelligence has come a long way, but it will be quite some time until AI can understand photos like these ones. Left: This criminal has his hands full of trouble. Center: This criminal is on the espresso lane to jail. Right: Oopsie loompa.

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### AI Virtual Staging an Entire House in Under 10 Minutes

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Are you a real estate agent looking to improve your property listings? If so, you may want to consider virtual staging. Virtual staging involves the use of advanced photo editing software to add furniture and decor to images of a property, creating a more inviting and livable space for potential buyers.

For example, a real estate agent in New York City could use virtual staging to transform a small and outdated apartment into a stylish and modern space that would appeal to young professionals. Another agent in Los Angeles used virtual staging to create a beachy and relaxed vibe in a vacant property near the ocean.



In this article, we'll explore how AI technology can save you time and money while making your listings stand out. Plus, you'll get an inside look at how I recently tried and tested this game-changing technology.



## This is the AI Virtual Staging Platform I tried

One example of this technology is [RoomGPTio](#), an AI-powered virtual staging tool. RoomGPTio uses GPT technology, which stands for Generative Pretrained Transformer, to generate realistic images of staged rooms. This technology is able to create images that are so realistic that it can be hard to distinguish them from actual photos.

Using RoomGPT is incredibly easy. All a user needs to do is upload a photo of a room, and the AI system takes care of the rest. You may select different styles such as modern, minimalist, vintage, professional, or even tropical.



Within just a few seconds, RoomGPT.io generates an image of the room with furniture and decor, making the room look fully furnished and ready for a potential buyer to move in.



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However, one downside I found is this platform only allows limited number of photo uploads for every 24 hours. I hope they will eventually wave this limit, or at least, have a paid version that can bypass this restrictions.

## How to Get Started with AI Virtual Staging



If you're a real estate agent interested in trying AI virtual staging for your property listings, there are a few things to keep in mind. First, it's important to choose the right virtual staging provider. Look for a provider that uses advanced AI technology and has experience working with real estate agents.

It's also important to provide high-quality images of the property to ensure the best results.



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When taking photos for AI virtual staging, it's best to take them at a straight-on angle and at a height that represents a person's natural viewpoint. This will allow the virtual staging software to accurately position furniture and decor in the room, creating a more realistic and appealing image for potential buyers.

Finally, make sure to work closely with the virtual staging provider to ensure that the virtual staging accurately represents the property and appeals to potential buyers.

[Here's another post with on how to take beautiful real estate photos. In there, you'll find helpful tips from a professional real estate photographers.](#)



### The Advantages of AI Virtual Staging

One of the main advantages of AI virtual staging is speed. Traditional virtual staging can take hours or even days to complete, depending on the complexity of the project. However, with AI virtual staging, an entire home can be staged in just minutes.

This means that real estate agents can get their property listings up and running much faster, which can lead to faster sales and increased revenue.

Another advantage of AI virtual staging is accuracy. AI technology can analyze the images of the property and determine the best furniture and decor to use based on factors like room size, lighting, and style. It creates a sense of flow and make the space look more inviting and livable.



This can result in more realistic and appealing virtual staging images that are more likely to attract potential buyers.

### Examples of AI Virtual Staging in Action

There are many examples of real estate agents who could use AI virtual staging to improve their property listings. Imagine an agent, John, who was struggling to sell a large, empty house in a rural area. After trying traditional virtual staging with little success, he decided to give AI virtual staging a try.

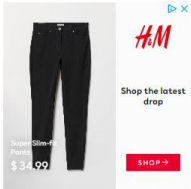
Using an AI virtual staging provider, John could stage the entire house in just 10 minutes. The virtual staging images were so realistic that potential buyers could envision themselves living in the space, and the house could potentially sell within a week of the new listing going live.



Another real estate agent, Sarah, could use AI virtual staging to transform a small, outdated apartment in the city. AI technology could determine the best furniture and decor to use to make the space look larger and more modern.

The resulting virtual staging images could be so effective that the apartment could sell within a month, despite being on the market for over a year with no offers prior to the virtual staging.

As a real estate agent, you could experience similar success by incorporating AI virtual staging into your marketing strategy.



Conclusion

In conclusion, AI-powered virtual staging has transformed the real estate industry by making the virtual staging process faster, more cost-effective, and more convenient. The use of machine learning algorithms to analyze the image of a room and add the most suitable furniture and decor has made virtual staging more realistic than ever before, allowing potential buyers to visualize themselves in the space.

With virtual staging, real estate agents can save time and money, and they can stage properties remotely without physical presence. It is fascinating to think about what other innovative solutions the industry will witness with the continuous advancement of technology.

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Jacob is a content writer and a real estate investor. He has experience working with different real estate professionals throughout the years, (i.e., appraisers, real estate agents, property managers, home inspectors.) In order to build a career you love.

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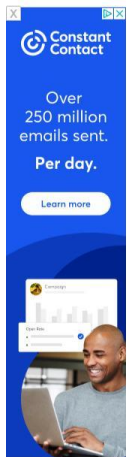


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